

RINGKASAN

Usaha peningkatan produksi dan kesuburan tanah entisol tanaman padi yang paling efektif dilakukan dengan pemberian pupuk. Oleh karena itu, untuk memperoleh pertumbuhan dan hasil padi yang optimal maka pemberian dosis dan macam pupuk N merupakan salah satu pilihan. Penelitian ini bertujuan untuk 1) Mengetahui pengaruh dosis dan macam pupuk N terhadap sifat kimia tanah entisol, 2) Mengetahui pengaruh dosis dan macam pupuk N terhadap serapan Si tanaman padi pada tanah entisol, dan 3) Mengetahui pengaruh dosis dan macam pupuk N terhadap pertumbuhan tanaman padi pada tanah entisol.

Penelitian dilakukan di Desa Playangan Kecamatan Gebang Kabupaten Cirebon dan Lab. Sumberdaya Lahan Fakultas Pertanian UNSOED selama empat bulan mulai bulan September 2020 hingga bulan Desember 2020. Rancangan Acak Kelompok (RAK) yang terdiri atas 2 faktor yaitu: (1) macam pupuk: pupuk urea, pupuk NZEO-SRPlus *Coating* 1%, dan *Coating* 3%; (2) dosis pupuk N: 0 kg/ha, 100 kg/ha, dan 200 kg/ha dengan 3 ulangan. Petak lahan ukuran 5m x 4m sebanyak 27 petak. Variabel yang diamati yaitu pH H₂O/KCl, DHL, REDOKS, N Total/Tersedia, P Tersedia/Total, K Total/Tersedia, KTK, C-Organik, Si Tersedia, Si Serapan, tinggi tanaman, dan panjang akar.

Hasil penelitian ini menunjukkan bahwa pemberian dosis Nitrogen 200 kg N/ha dapat meningkatkan potensial Redoks, Si Tersedia, dan tinggi tanaman tanaman padi IR64 pada lahan padi tanah entisol. Pemberian dosis N 100 kg N/ha dapat meningkatkan N Tersedia dan N Total lahan padi pada tanah entisol. Pemberian macam pupuk N NZEO-SRPlus *coating* 1% dan 3% mampu meningkatkan pH H₂O dan pH KCl pada lahan padi tanah entisol. Pemberian pupuk NZEO-SRPlus *coating* 1 % mampu meningkatkan kadar serapan Si tanaman padi pada tanah entisol. Pupuk NZEO-SR Plus *coating* 3% dan dosis 200 kg N/ha memberikan pertumbuhan tanaman padi IR64 terbaik pada tanah entisol.

SUMMARY

Efforts to increase rice production in Indonesia continue to be developed sustainably through increased production and fertility of rice crop entisol soil is most effectively carried out by the provision of fertilizer. Therefore, to obtain optimal rice growth and yield, dosing and kinds of N fertilizer is one of the options. This study aims to 1) Know the influence of doses and kinds of fertilizer N more than the chemical properties of entisol soil, 2) Know the influence and kinds of fertilizer N to the absorption of rice plants on the soil entisol, and 3) influence and type of fertilizer N over rice crop plants on entisol soil.

Research in Playangan Village, Gebang District, Cirebon Regency and Lab. Land Resources faculty of Agriculture UNSOED for four months from September 2020 to December 2020. Random Group Design (RGD) consisting of 2 factors, namely: (1) kinds of fertilizer: urea fertilizer, NZEO-SRPlus Coating 1%, and Coating 3%; (2) fertilizer dose N: 0 kg/ha, 100 kg/ha, and 200 kg/ha with 3 replays. Plots of land measuring 5m x 4m as much as 27 plots. Observed variables are pH H₂O/KCl, DHL, REDOX, N Total/Available, P Available/Total, K Total/Available, KTK, C-Organic, Si Available, Si Absorption, plant height, and root length.

The results of this study showed that the administration of Nitrogen doses of 200 kg N / ha can increase the potential of Redox, Available, and the height of IR64 rice plant plants on entisol soil rice fields. Dosing N 100 kg N/ha can increase N Available and N Total rice fields on entisol soil. The provision of N NZEO-SRPlus coating 1% and 3% is able to increase the PH H₂O and PH KCl on entisol soil rice fields. The provision of NZEO-SRPlus coating fertilizer 1% is able to increase the uptake rate of the rice plant in the entisol soil. NZEO-SR Plus coating of 3% coating and dose of 200 kg N/ha provide the best growth of IR64 rice plants in entisol soil.